

BRIEF NOTES AND RECORDS

SOMATOCHLORA ARCTICA (ZETT.) SEEMS TO MIGRATE TO ESCAPE FROM WILDFIRES (ANISOPTERA: CORDULIIDAE)

S. arctica is known from the Novosibirsk province, Russia, only by scarce records from small forest lakes in the districts of Bolotnoe and Moshkovo, situated N of Novosibirsk (KOSTERIN et al., 2001, *Sympetrum*, Hyogo 7/8: 24-49). In the Bakchar district (Tomsk prov.), some 200 km N of Novosibirsk, it appears as one of the most abundant dragonfly species (BERNARD & KOSTERIN, 2010, *Odonatologica*

39: 1-28): during 12-22 July 2006 the foraging swarms were found above any dry open area, although the abundance of these drastically decreased after the 14th of July. The breeding sites were not found, they are probably located in the inaccessible mesotrophic fens, overgrown with sedge amidst vast *Sphagnum* bogs.

In 2012, five dead *S. arctica* specimens were collected in Novosibirsk Academy Town, ca 30 km S of downtown Novosibirsk (and ca 50 km S of the Moshkovo district border), obviously crashed by traffic while foraging along and above the asphalt-paved roads. In four speci-

mens the wings were clear and in one male moderately smoked (they are frequently smoked in specimens from Tomsk province). During some 30 years of more or less regular observations in Academy Town, the species has never been encountered there.

The environmental conditions prevailing at the time the above specimens were found were exceptional: July had been very hot and smog of various intensities occurred in the province of Novosibirsk almost every day, with the hot air poorly transparent, smelling smoke. The sun could be watched by naked eye: as a red spot with sharp margins against a white sky. This was due to the forest fires, occupying vast areas of Siberia, in particular that part of Tomsk province, situated N of Novosibirsk province, which seemed to be a *S. arctica* paradise (see above). "The summer of 2012 has proved to be the most severe wildfire season Russia has faced in a decade. [...] More than 17,000 wild-

fires had burnt more than 30 million hectares (74 million acres) through August 2012, according to researchers at the Sukachev Institute of Forest in Russian Academy of Sciences." (http://www.nasa.gov/mission_pages/fires/main/world/20120913-siberia.html).

We assume, *S. arctica* escaped the fires in its native area by long migration. An alternative option would be a mass propagation, triggering the individuals to expand by plain diffusion, resulting in their noticeable numbers far from that area. This seems less likely as it would imply two independent anomalies: fires and mass propagation. High temperatures could favour the propagation, but they could have no effect if taking place after the emergence of the adults, as was the case in the summer of 2012.

O.E. Kosteřin, Institute of Cytology and Genetics, SB RAS, Acad. Lavrentyev ave 10, Novosibirsk-630090, Russia